Cropland

Planning Resource Management Systems

Successful resource management on cropland is the correct application of a combination of practices that will meet the needs of the cropland ecosystem (soil, water, air, plant, and animal resources) and the objectives of the land user.

Quality criteria that must be met on cropland for each of the resource concerns is explained in Section III of the Field Office Technical Guide.

Managing growing plans and/or managing their residues is the foundation on which the cropland RMS is built. The practice Conservation Crop Rotation is an ESSENTIAL practice because it is the mechanism by which plants are grown and manageable residues produced. Residue Management (No-till/Strip-till, Mulch-till, Ridge-Till, or Seasonal) is an ESSENIAL practice. A practice which may be NEEDED that will provide growing crops is Cover Crop.

Crop residues produced and managed (or added) in defined amounts are generally necessary to help control erosion. A defined amount is also often necessary for improved soil quality. The amount needed for improvement can be the same as that for erosion control, or an additional defined amount may be needed.

Nutrient Management becomes an ESSENTIAL practice when plant nutrients are to be applied, and, likewise, Pest Management becomes an ESSENTIAL practice when pest control methods are to be applied.

Additional practices necessary to control sheet and rill erosion or ephemeral gully erosion or to achieve other land user objectives and resource needs are needed practices. Examples of these Contour Farming, Field Border, Terrace, Grassed Waterway, Contour Buffer Strips, Filter Strip, or Diversion.

Resource Management Systems include combination of practices that are:

1. ESSENTIAL – Crop and residue management practices are essential to successful cropland management and are always planned in the RMS.

2. NEEDED - These practices are planned when necessary to provide cover crops, additional residue, control erosion, or treat specific resource problems to meet the RMS criteria.

A RMS is developed by selecting a combination of the ESSENTIAL, plus the NEEDED practices, or both, whose combined effects will meet the quality criteria for each resource (soil, water, air, plant, and animal) and the objectives of the land user. The following is a list of ESSENTIAL and NEEDED practices applicable to cropland.

ESSENTIAL Practices for Cropland

Conservation Crop Rotation – 328
*Residue Management, No Till/Strip – 329A or
Mulch Till – 329B or
Ridge Till – 329C or
Seasonal – 344
Nutrient Management - 590
Pest Management - 595

NEEDED Practices*

Alley Cropping – 311
Deep Tillage – 324
Contour Buffer Strips - 332
Contour Farming – 330
Contour Stripcropping – 585
Cover Crop - 340
Critical Area Planting - 342
Diversion - 362
Field Border - 386
Filter Strip - 393
Grade Stabilization Structure – 410
Grassed Waterway – 412
Irrigation System – 442, 443, or 441
Irrigation Wata4er Management – 449
Land Smoothing – 466
Mulching - 484
Pasture and Hayland Planting – 512
Row Arrangement – 557
Stripcropping, Field – 586
Terrace – 600
Underground Outlet – 620
Wildlife Upland Habitat Management – 645
Wetland Wildlife Habitat Management – 644

*A minimum of one residue management is required. More than one may be needed based on the rotation system and crop.

**Other practices may be required to treat specific resource problems to meet the RMS criteria.